			01-10-2000		
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J. MICHAEL RAMS	SEY and STEPHEN C. JACOBSON	Name: LOCKHEED MARTIN ENERGY R	ESEARCH CORPORATION		
Additional name(s) of conveying party(ies) attached? □Yes ⊠No			Internal Address:		
` `		100	Street Address: Oak Ridge National L P.O. Box 2008	aboratory	
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⊠Assignment □Security Agreer □Other		DEC 131	neddational name(s) & address(es) attached?	□Yes ⊠No	
Execution Date:	November 19, 1999	To roans	Redu		
4. Application number(s) or patent number(s):					
If this document is being filed together with a new application, the execution date of the application is:					
A. Patent Application No.(s)  B. Patent No.(s)					
09/408,060					
Additional Application/Patent Numbers attached? □Yes ⊠No					
5. Name and address of party to whom correspondence concerning document should be mailed:			6. Total number of applications and pater involved:		
Name: VINCEN					
Address: DANN, DORFMAN, HERRELL AND SKILLMAN, P.C.  1601 Market Street, Suite 720  Philadelphia, Pennsylvania 19103-2307  Telephone: (215) 563-4100 Facsimile: (215) 563-4044			7. Total Fee (37 CFR 3.41)	\$ 40.00	
			□Enclosed		
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VINCENT T.	PACE	Vincen	N) Face December	er 8, 1999	
Name of Attorney Signing Signature of Attorney Date					
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PATENT REEL: 010471 FRAME: 0976

## ASSIGNMENT

WHEREAS, WE, the below-named inventors whose residence and post office are as stated below, have invented certain new and useful improvements in **MICROFLUIDIC DEVICES FOR THE CONTROLLED MANIPULATION OF SMALL VOLUMES** described in a provisional application for Letters Patent of the United States, Application No. 60/148,502, filed August 12, 1999, and described and claimed in a non-provisional application for Letters Patent of the United States, Application No. 09/408,060, filed September 29, 1999; and

WHEREAS, LOCKHEED MARTIN ENERGY RESEARCH CORPORATION, a corporation of the State of Delaware, having an office at Oak Ridge National Laboratory, Post Office Box 2008, Oak Ridge, Tennessee 37831-6255, hereinafter called the ASSIGNEE, is desirous of acquiring the entire right, title and interest in the application and invention and to any Letters Patent that may be granted therefor in the United States of America and in any and all foreign countries.

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, we hereby assign to ASSIGNEE the entire right, title and interest in the application and the invention, to all rights of priority thereto pursuant to the International Convention for the Protection of Industrial Property, and in any Letters Patent on the invention that may be granted in the United States of America and in any and all Letters Patent that are divisions, reissues, continuations, substitutions or extensions of any Letters Patent or applications therefor on the invention.

We hereby authorize and request the Commissioner of the United States Patent and Trademark Office and the officials of any and all foreign countries to issue any and all of said Letters Patent, when granted, to the ASSIGNEE.

Further, we hereby agree to communicate to said ASSIGNEE or its representatives any facts known to us respecting said invention, to testify in any legal proceedings, sign all lawful papers, execute all divisional, continuation, substitution, renewal and reissue applications, to execute all necessary assignment papers to cause any and all of said Letters Patent to be issued to said ASSIGNEE, and to make all rightful oaths and generally do everything possible to aid said ASSIGNEE and its representatives to obtain and enforce proper protection for said invention in the United States of America and in any and all foreign countries.

We further agree that the terms, covenants and conditions of this assignment shall inure to the benefit of ASSIGNEE, its successors, assigns, and legal representatives, and shall be binding on us, our heirs, legal representatives, and assigns.

Docket No. ERID 0686

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Full name of first inventor: J. MICHAEL RAMSEY	
Signature: J. Michael Ramon Date: 11/19/99	
Residence: Knoxville, Tennessee	
Post Office Address: 733 Hampton Roads Drive, Knoxville, Tennessee 37922	
State of Tennessee ) County of KOCKE )	
On this	same
WITNESS my hand and seal the day and year last above given.  Stelling f. Stafford  Notary Public	
SEAL My Commission Expires: Sept. 27, 2000	
Full name of second inventor: STEPHEN C. JACOBSON  Signature: Date: ///97	
Residence: Knoxville, Tennessee	
Post Office Address: 3639 Taliluna Dr., #D-1, Knoxville, Tennessee 37919	
State of Tennessee ) County of <u>koura</u> )	
On this	lic in e the said
WITNESS my hand and seal the day and year last above given.  Sulling f. Sufficient  Notary Public	
SEAL  My Commission Expires:  My commission expires Sent. 27, 2000	

REC'ORDED: 12/13/1999

PATENT REEL: 010471 FRAME: 0978